

Getting Started with OpenShift Local

Bjoern Steffens | December 2022

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Why OpenShift local?

If you can start it on your laptop, it is designed for testing, trying things out and learn without having to have access to a larger Cloud setup. Think of it a little bit as a community edition for your own private purpose that you always have in your computer bag. Yes, you will need to find out by installing it, if you have sufficient resources to run it on your laptop.

Prerequisites for installing OpenShift local

The hardware requirements are low but that does not guarantee that OpenShift local will start on your system. I have two MacBooks, one with Intel CPUs, 64 GB RAM and an M1 with only 16 GB RAM. OpenShift does not launch on my M1 highly likely to insufficient resources as I have a few other things running on it next to an OpenShift local cluster.

The best thing you can do because the installation is so easy, is to install it and see if it starts or not and then you have your answer within minutes.



The old name of OpenShift Local is CRC (Code Ready Containers). You will see references to CRC here and there because the name of the product recently changed.

Links:

- [Overview](#)
- [OpenShift Getting Started Guide](#)
- [Installation](#)
- [Product Documentation](#)

In essence this is what you need to be able to launch OpenShift Local

Software Resources:

- Xcode when you install on a Mac

Hardware Resources:

- 4 physical CPU cores
- 9 GB of free memory
- 35 GB of storage space

Locating and downloading the code

You will need an active RedHat subscription to be able to download the code.

Have your RedHat login ready and go to this link and download the appropriate package for your laptop OS. Mind to also download the pull secret. You will need it during the installation.

Software Download

1

Download what you need to get started

OpenShift Local

Download and open the OpenShift Local file. Opening the file will automatically start a step-by-step installation guide.

MacOS

x86_64

[Download OpenShift Local](#)

Pull secret

Download or copy your pull secret. You'll be prompted for this information during installation.

[Download pull secret](#)

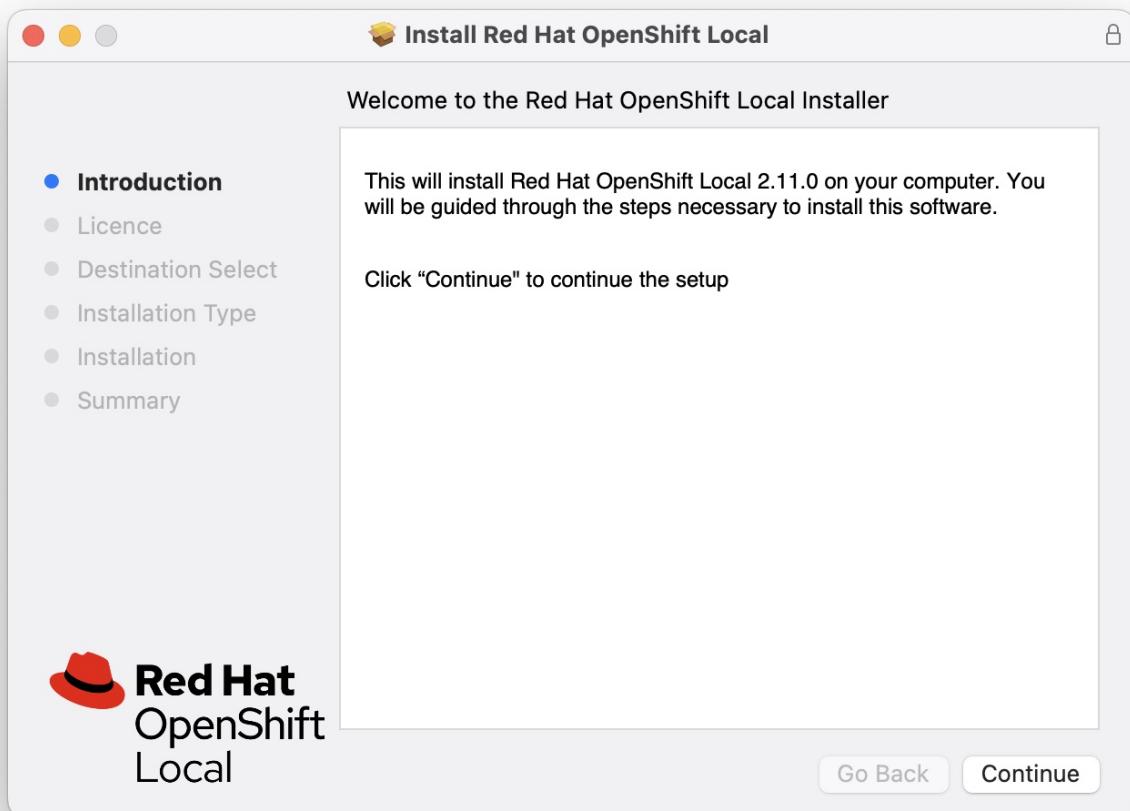
 [Copy pull secret](#)

Installing OpenShift local

The installation is very simple and consists of 1) the installation and 2) configuration. The configuration part can take several minutes to complete depending how powerful our laptop is. On my MacBook Pro 16" it took approximately 15 Minutes to complete the configuration part before I could start and access the "mini cluster".



Once you have installed xcode and OpenShift local I recommend to reboot your Mac before you start everything.



 **Install Red Hat OpenShift Local** 

Software Licence Agreement

● Introduction
● **Licence**
● Destination Select
● Installation Type
● Installation
● Summary

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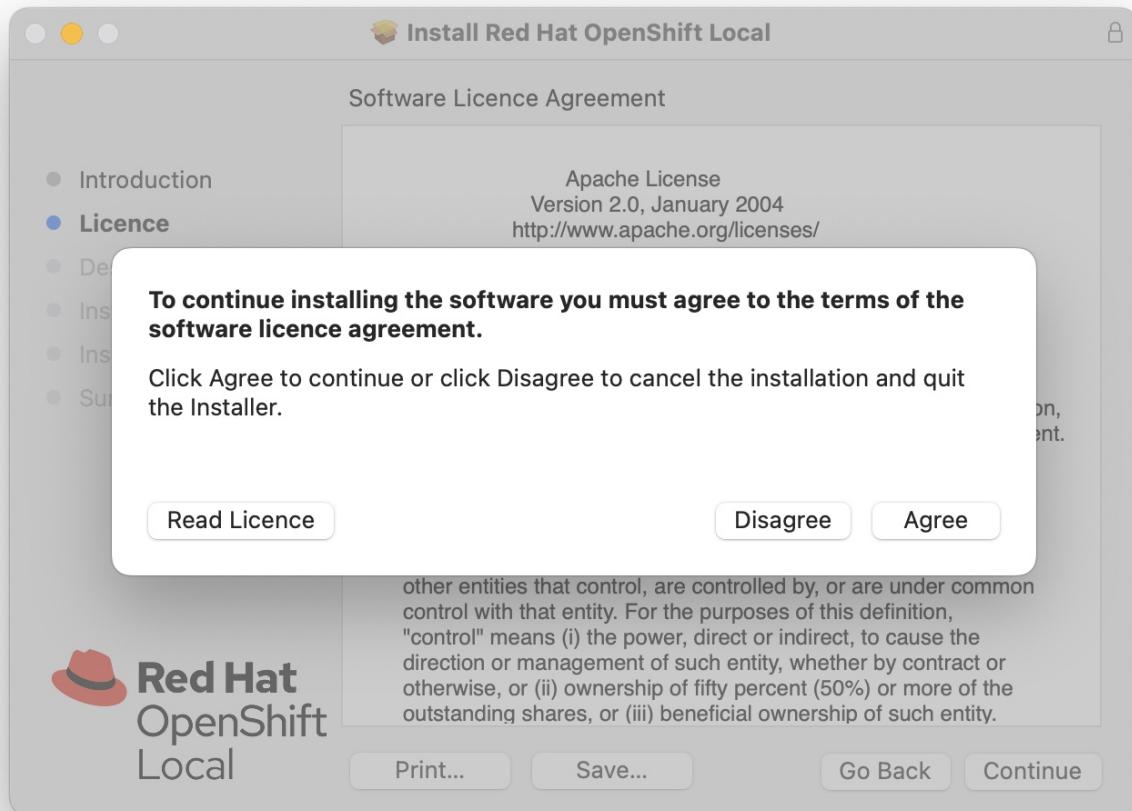
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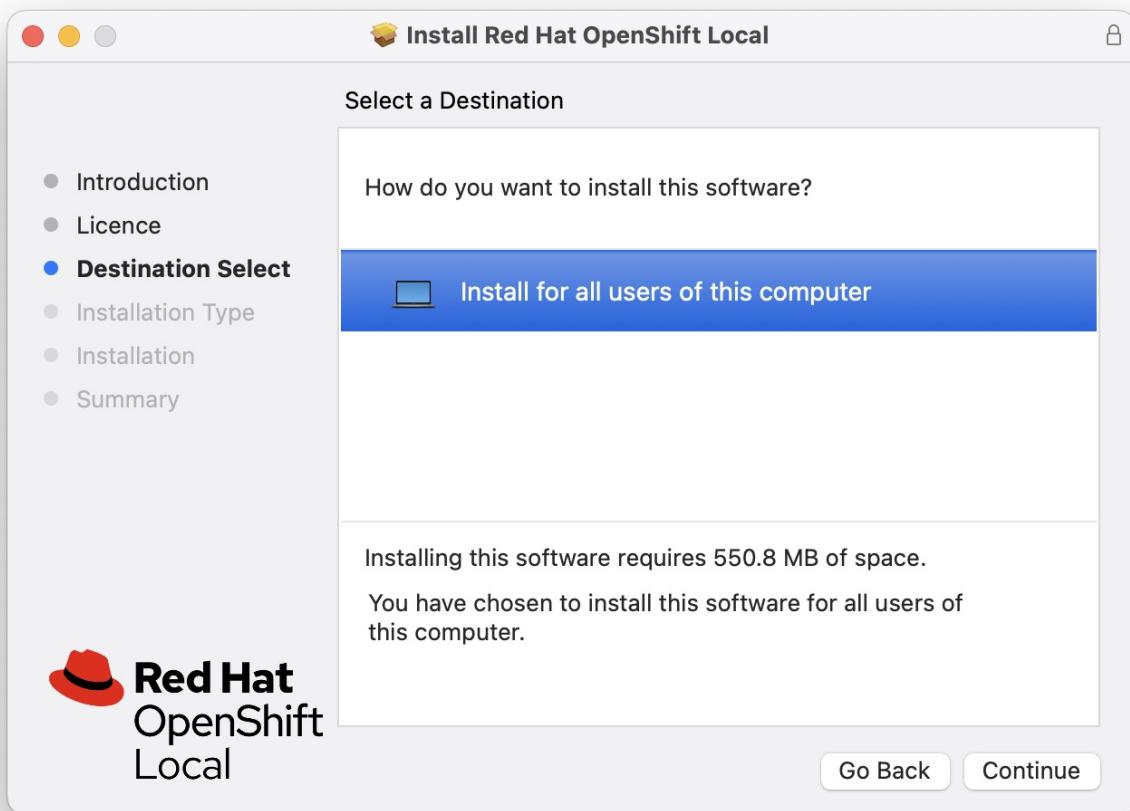
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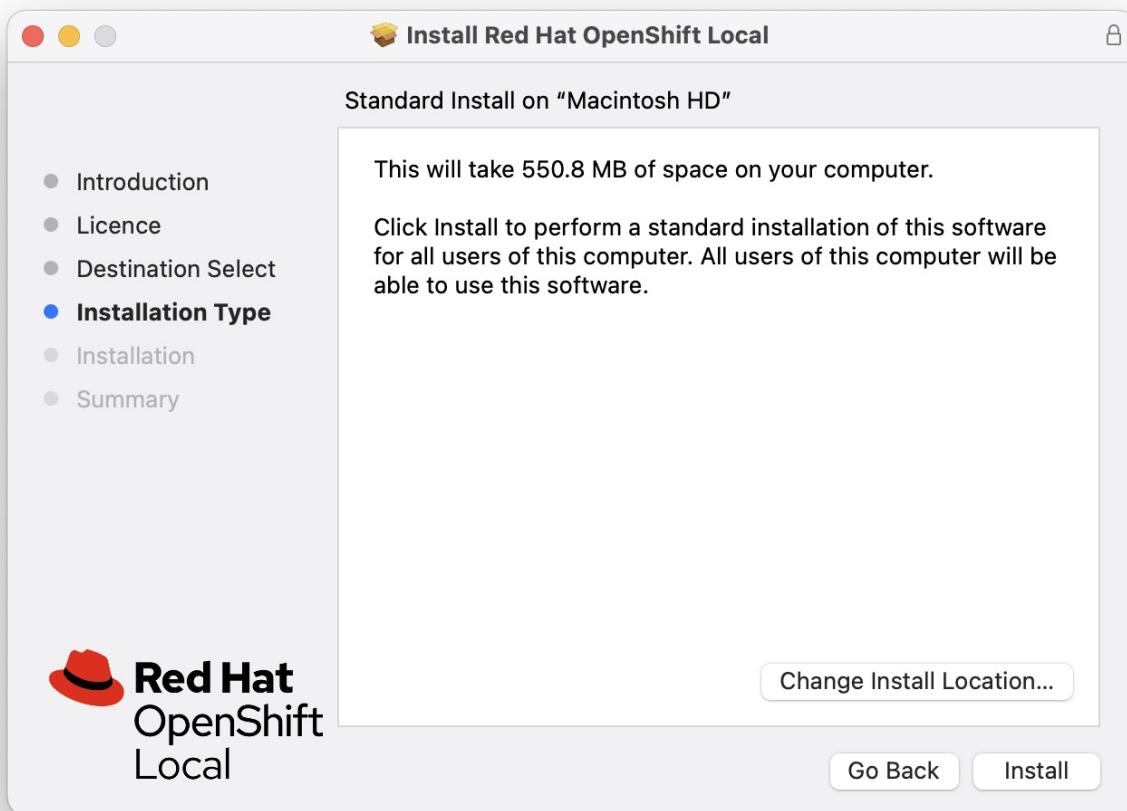
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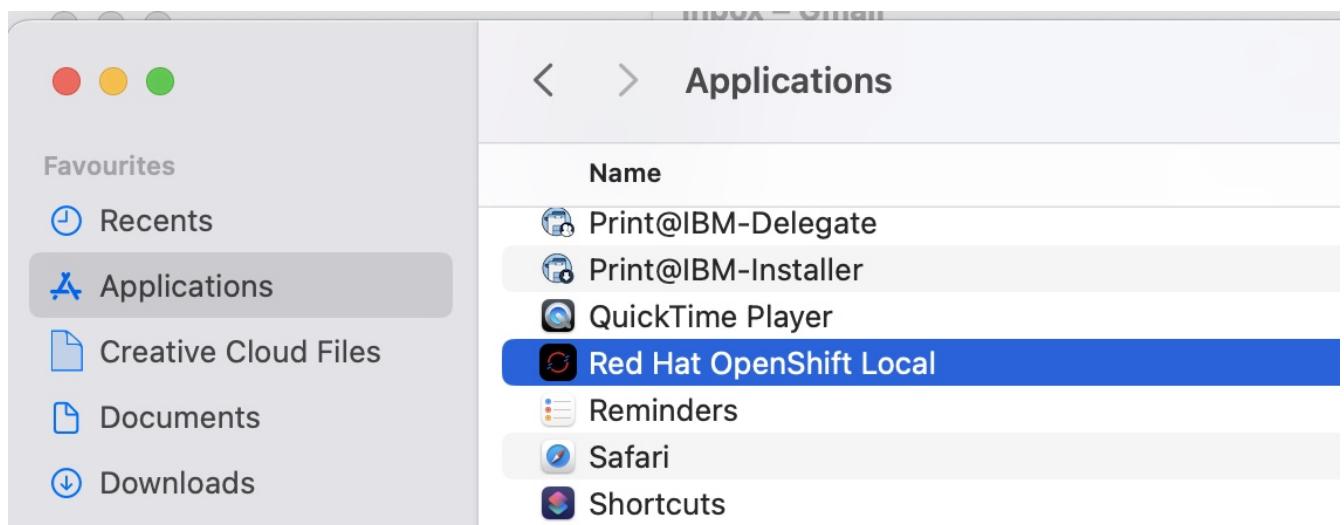
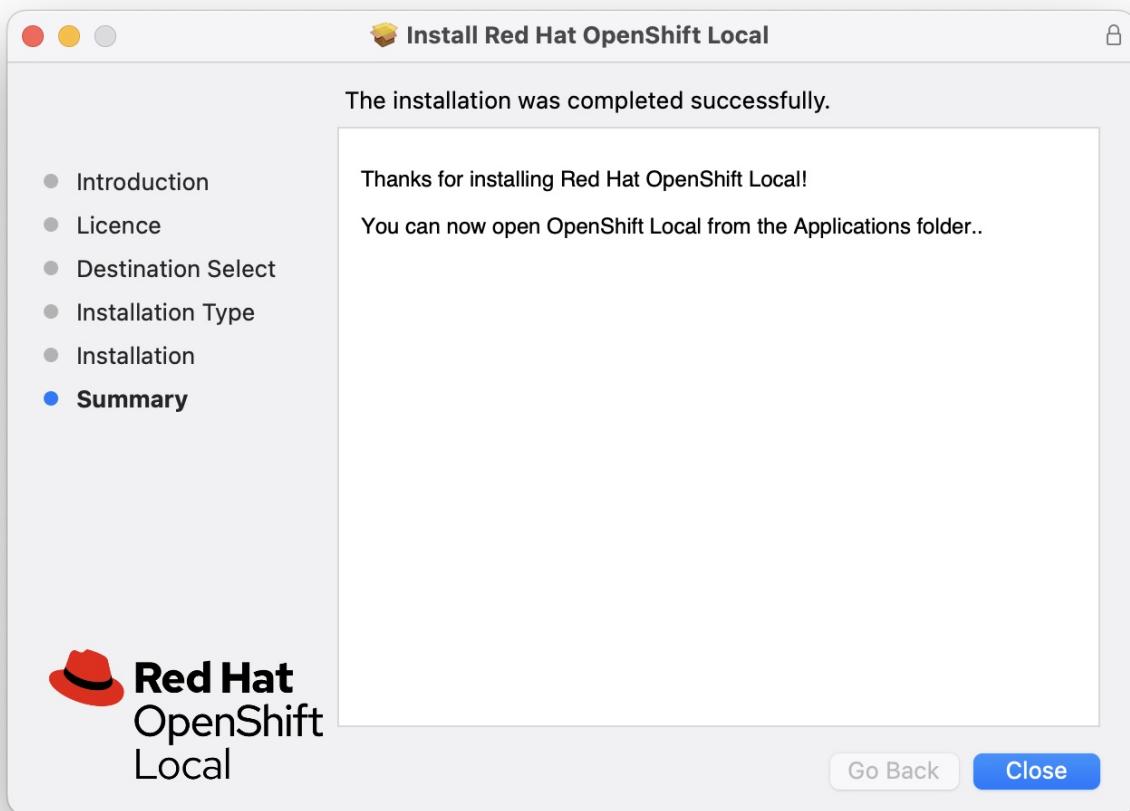


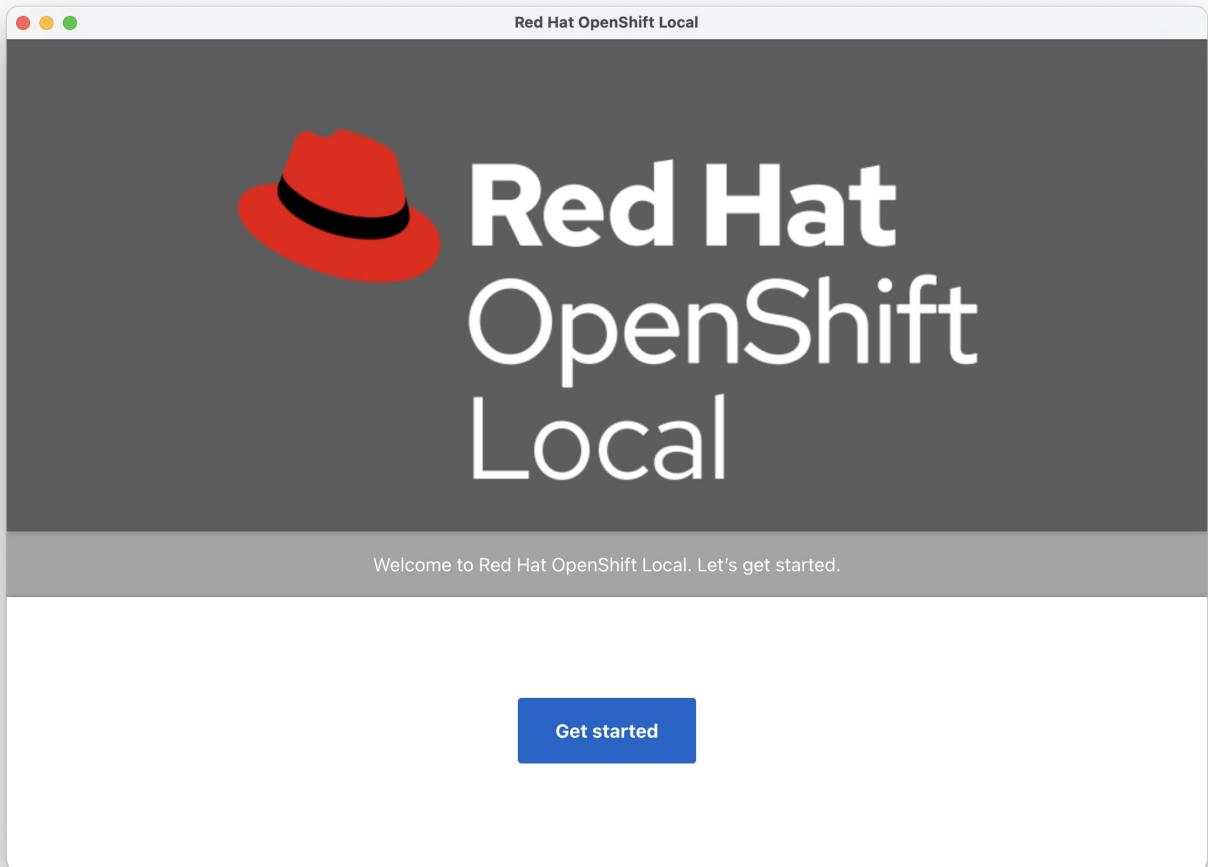


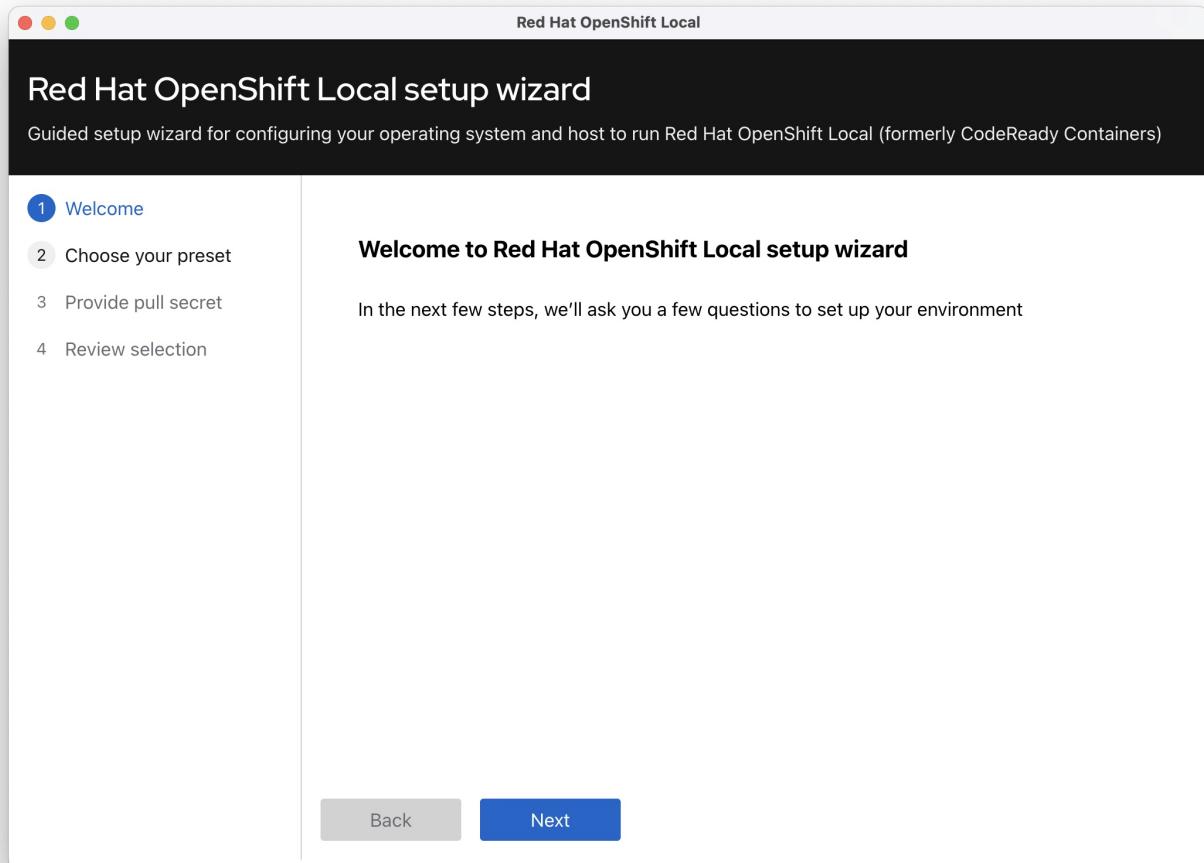
 **Red Hat**
OpenShift
Local

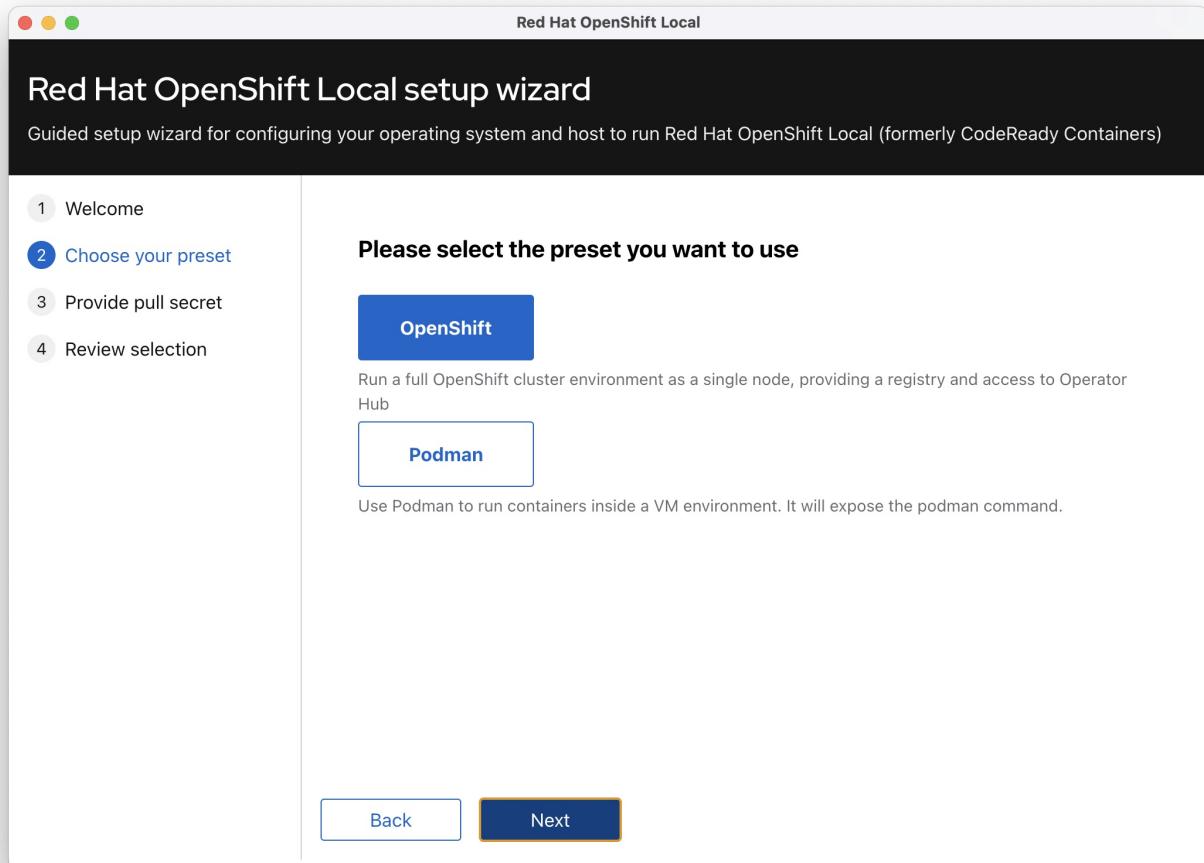
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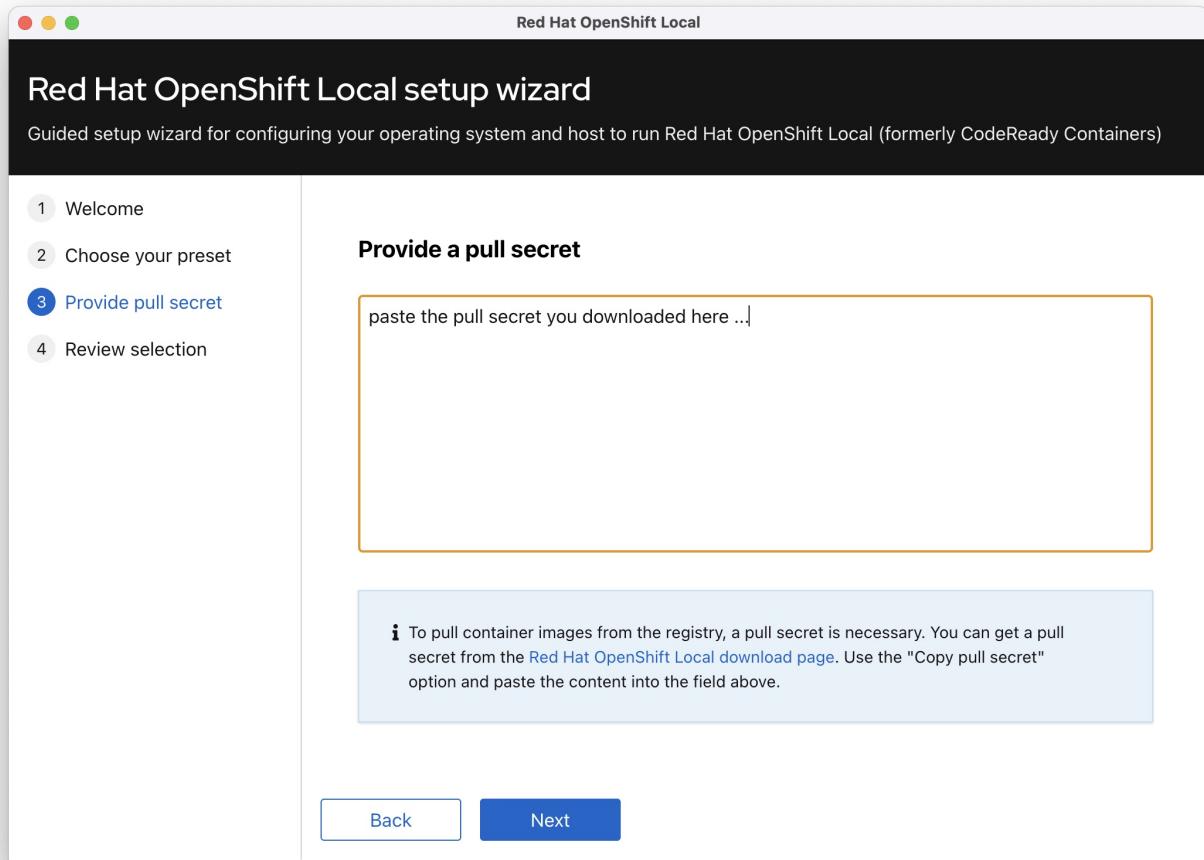


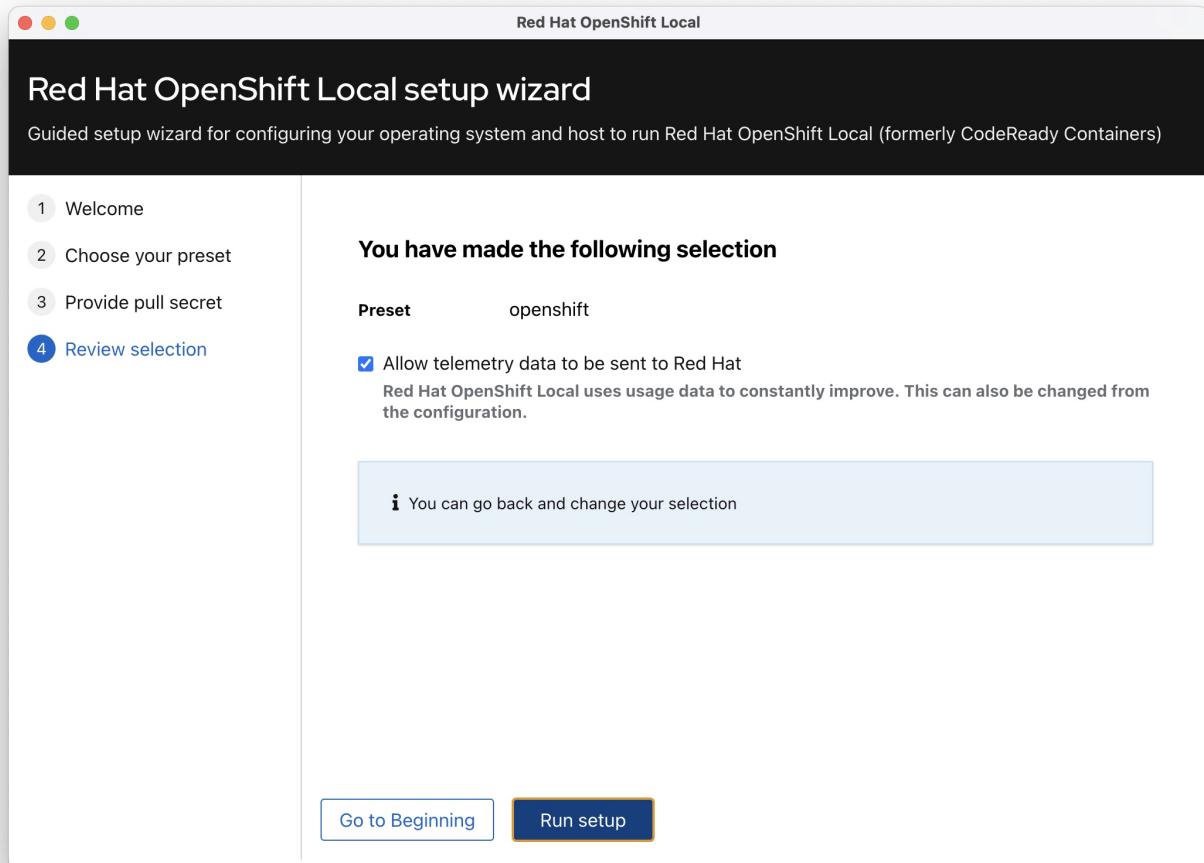


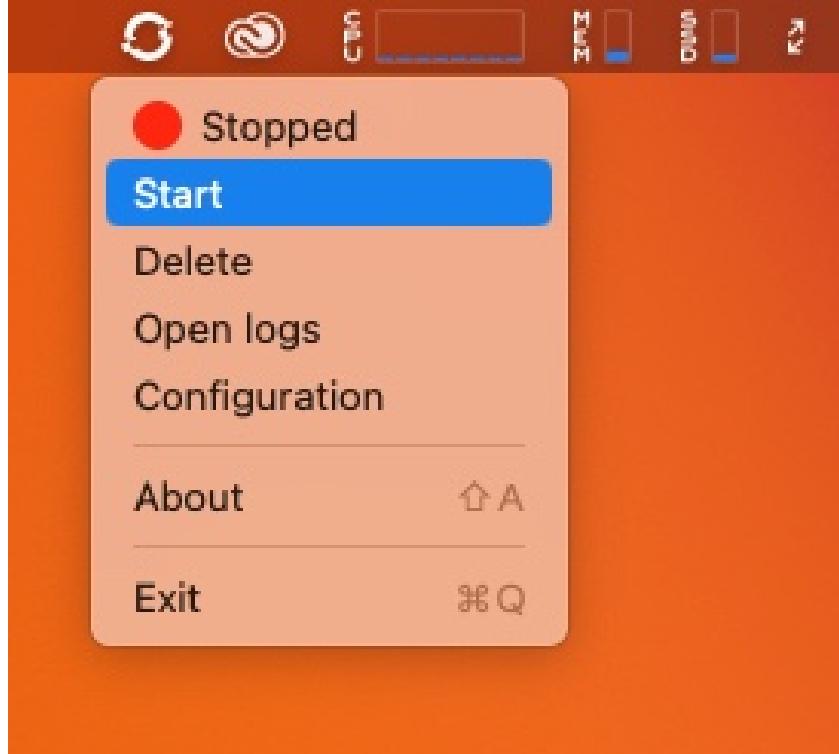
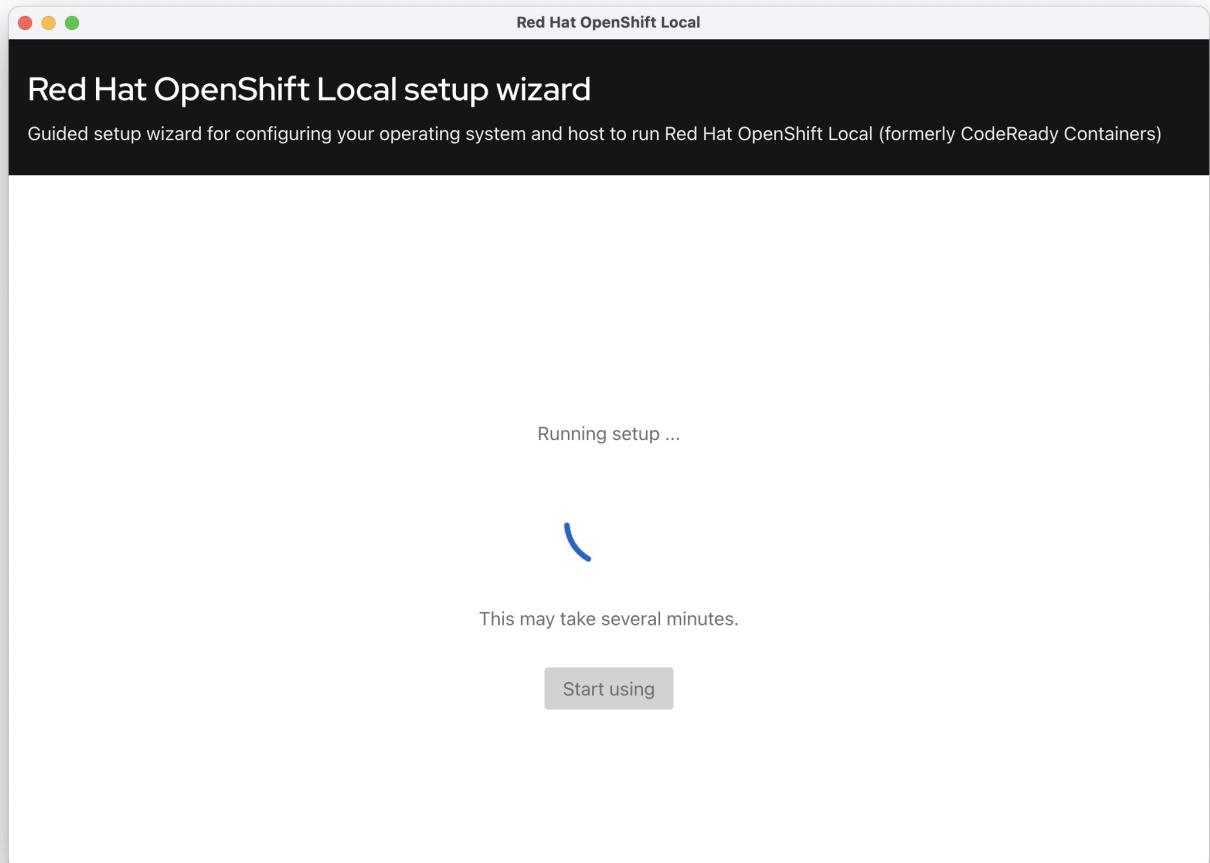




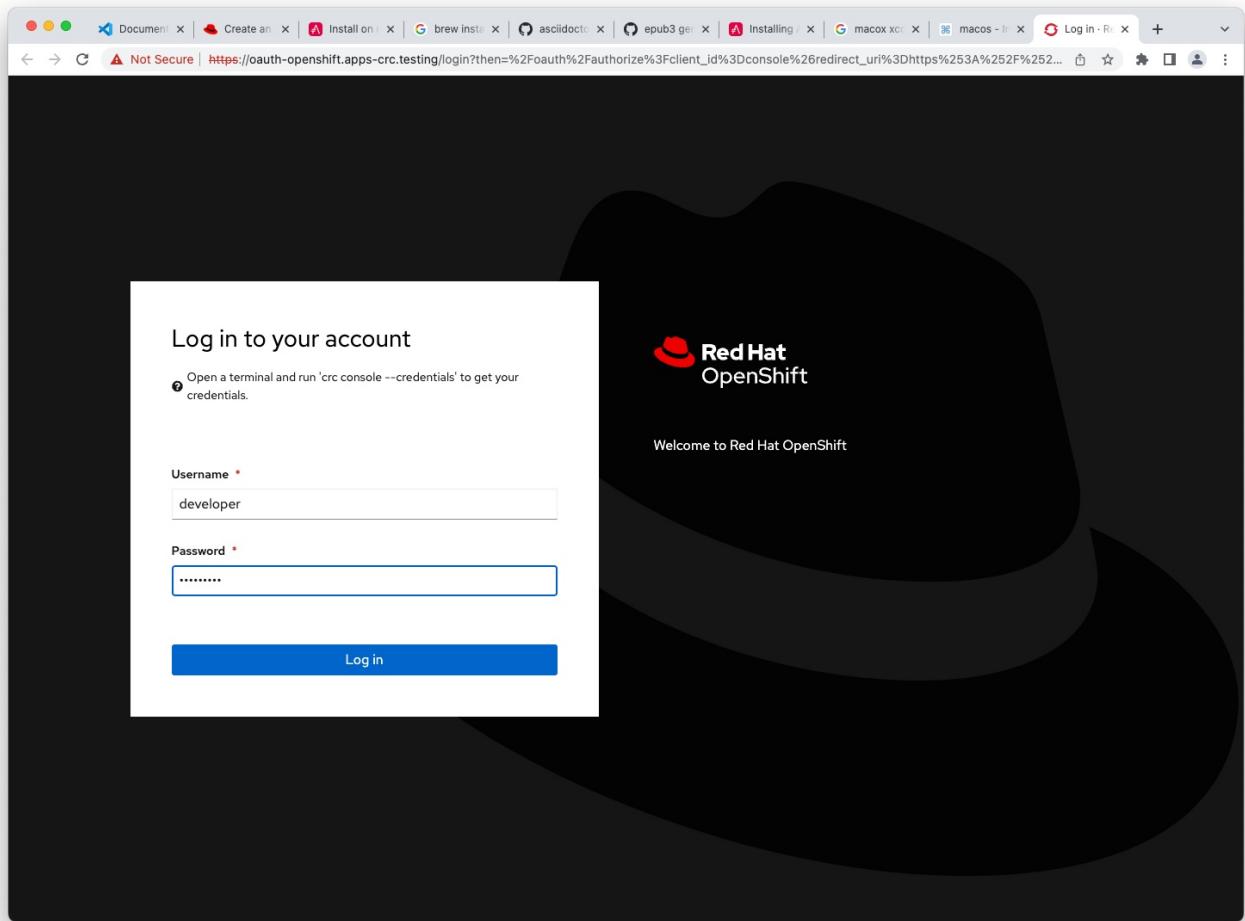








Default user and password is developer / developer



The screenshot shows the Red Hat OpenShift Local web interface. At the top, a red banner reads "OpenShift Local cluster is for development and testing purposes. DON'T use it for production." Below the banner, the Red Hat OpenShift logo is displayed. The left sidebar, titled "Developer", contains the following navigation items:

- +Add
- Topology
- Observe
- Search
- Builds
- Helm
- Project
- ConfigMaps
- Secrets

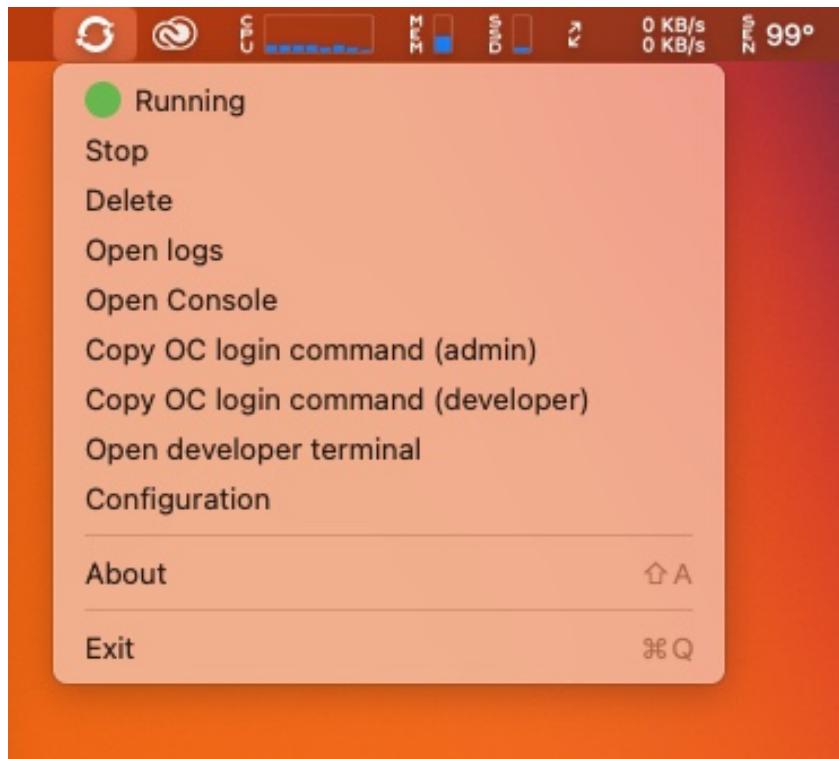
The main content area has two sections:

- Getting Started**: A light blue box containing instructions: "OpenShift helps you quickly develop, host, and scale applications. To get started, create a project for your application. To learn more, visit the OpenShift documentation." It also includes a link to "Create a new project".
- Add**: A white box with the sub-header "Select a Project to start adding to it or [create a Project](#)". Below this, a message says "No Projects found".

The screenshot shows the Red Hat OpenShift web interface. The left sidebar is titled "Administrator" and contains the following navigation items:

- Home
- Operators
- Workloads
- Networking
- Storage
- Builds
- User Management
- Administration

The main content area is titled "Welcome to OpenShift". It includes a brief introduction: "OpenShift helps you quickly develop, host, and scale applications. To get started, create a project for your application." Below this are links to "Create Project", "OpenShift documentation", "Download the command-line tools", and "Create a new project".



Completely removing OpenShift local from a Macbook

Use the command line

```
eval $(crc oc-env)
crc stop
crc delete
crc cleanup # This does part of the left-over-cleanup on disk
rm -rf ~/.crc
```

Steps to remove left-over if still present:

- Quit the application on the desktop
- Delete the App by dragging and dropping to bin or using CleanMyMac

Look for any leftover here to really make sure you get everything off of the machine:

- ~/Library/
- ~/Library/Caches/
- ~/Library/Preferences/
- ~/Library/Application Support/
- ~/Library/Application Support/CrashReporter/
- ~/Library/Saved Application State/

Shell command to run to find any remaining leftovers

```
# Find the left over first
ls -altr ~/Library | grep -i red
rm -rf {whatever you find with "redhat"}

# Reboot the machine
# Reinstall and reconfigure OpenShift local if required
```

How far can you take OpenShift Local?

Recently Rhett Widurski and Michael Klug hosted a few great education sessions teaching us how to manage a real cluster beast worth of OpenShift. I was able to do all those exercises on my OpenShift local installation, so it is rather powerful but of course only intended for test and development purposes. Having said that, you should not have to go and look for a productive cluster before you can try something out, this deployment type should suffice for most simple use cases.

Appendix - AsciiDoctor

What is AsciiDoc?

AsciiDoc can more than Markdown and lends itself better to technical documentation and collaboration across tools like Github. The syntax is more comprehensive vs Markdown and the learning investment pays off swiftly when your documentation gets complex and intertwined.

AsciiDoc is OpenSource but has been around since many years and is getting good traction. There are standardization and communities working the tool contagiously hence it is something worthwhile looking into.

How do you edit and preview asciidoc files?

There are plugins to a few IDEs and the most prominent one is Visual Studio Code, where you can edit and live-preview the content. See AsciiDoc toolchain below how to convert an adoc file into other various formats.

Links

- [AsciiDoc](#)
- [Asciidoc](#)
- [Documentation](#)
- [Comprehensive Cheat-Sheet and Sample file](#)

What is the asciidoc toolchain?

Editing an asciidoc (adoc) file in Visual Studio Code, you need to transform the file into something consumable for your audience. You can however preview the file while editing it in Visual Studio Code so that you have a good understanding of the final output.



The adoc file is rendered by Github so you can point to it and share the link and it can be consumed without having to first needing to install an IDE. Just like the file you are reading now.

The most popular formats are:

- pdf
- html
- epub

You will need to install the command line toolchain and use a very few but easy command to transform the adoc file into one or more of the mentioned formats above.

Before you install asciidoc you need to install xcode including the xcode command line tools below:

```
sudo xcode-select --install
```

```
sudo xcode-select -r  
sudo xcodebuild -license
```

Installation instructions

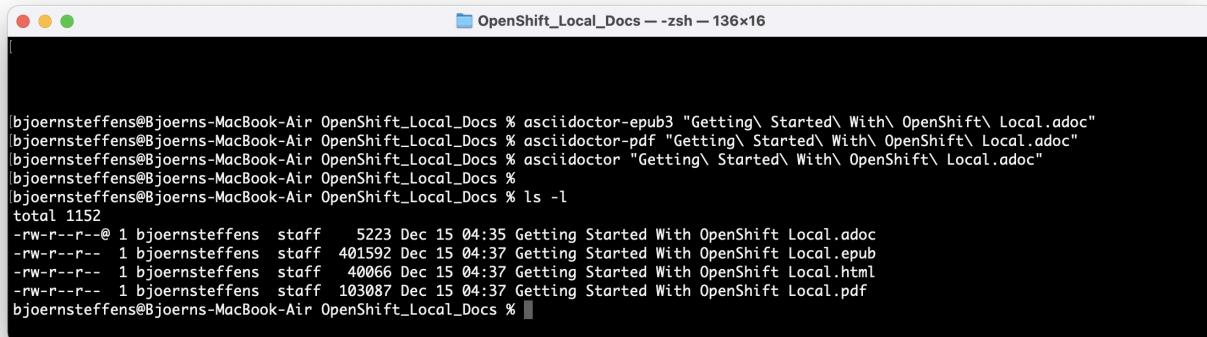
- [Getting the toolchain installed on a Mac](#)

Installing the pdf and epub converters

```
sudo gem install asciidoctor-pdf  
sudo gem install asciidoctor-epub3
```

Shell Commands to convert the file

```
# Change to the folder where your adoc file file  
  
> asciidoctor-epub3 "Getting\ Started\ With\ OpenShift\ Local.adoc"  
> asciidoctor-pdf "Getting\ Started\ With\ OpenShift\ Local.adoc"  
> asciidoctor "Getting\ Started\ With\ OpenShift\ Local.adoc"
```



The screenshot shows a terminal window titled "OpenShift_Local_Docs -- zsh -- 136x16". The user has run three commands to convert a single Adoc file into different formats:

```
bjoernsteffens@Bjoerns-MacBook-Air OpenShift_Local_Docs % asciidoctor-epub3 "Getting\ Started\ With\ OpenShift\ Local.adoc"  
bjoernsteffens@Bjoerns-MacBook-Air OpenShift_Local_Docs % asciidoctor-pdf "Getting\ Started\ With\ OpenShift\ Local.adoc"  
bjoernsteffens@Bjoerns-MacBook-Air OpenShift_Local_Docs % asciidoctor "Getting\ Started\ With\ OpenShift\ Local.adoc"  
bjoernsteffens@Bjoerns-MacBook-Air OpenShift_Local_Docs %  
bjoernsteffens@Bjoerns-MacBook-Air OpenShift_Local_Docs % ls -l  
total 1152  
-rw-r--r--@ 1 bjoernsteffens staff 5223 Dec 15 04:35 Getting Started With OpenShift Local.adoc  
-rw-r--r-- 1 bjoernsteffens staff 401592 Dec 15 04:37 Getting Started With OpenShift Local.epub  
-rw-r--r-- 1 bjoernsteffens staff 40066 Dec 15 04:37 Getting Started With OpenShift Local.html  
-rw-r--r-- 1 bjoernsteffens staff 103087 Dec 15 04:37 Getting Started With OpenShift Local.pdf  
bjoernsteffens@Bjoerns-MacBook-Air OpenShift_Local_Docs %
```

06:51
Files

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